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FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of )  
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The need for spectrum for unlicensed wireless office telephone systems is clear. At present, there are 117 million working adults in the United States. Today, there are at least 70 million wired business telephone sets serving these people, a total which is expected to grow to more than 80 million by the year 2000. Experts estimate that, with timely authorization of unlicensed PCS, as many as 25% or more of these wired telephone sets, or about 20 million sets, would be replaced with wireless sets by the year 2000. See Alexander Resources, Wireless Business Communications Systems: Customer Requirements and Marketing Strategies (1993). The same

be little question that the market will be very large and will generate important productivity gains for U.S. industry -- provided that adequate radio spectrum resources are made available.

As NATA has explained in previous submissions (see NATA's Comments filed January 15, 1993), the successful development of this important wireless office telecommunications systems market requires an open entry policy. As a result of the Commission's highly successful open-entry policy for the wired CPE market, end users are accustomed to being able to select from a multitude of competing suppliers to serve their office communications system needs. End users expect and deserve to be able to purchase, install and operate their office communications systems with a minimum of "red tape" in the form of licensing or registration requirements. As wireless communications markets develop, end users will expect to be able to purchase wireless office devices and systems from the same suppliers who supply the wired office communications systems -- i.e., wired PBXs, key systems, centrex systems, and LANs -- which are already on the market, and with a full range of "proprietary" features comparable to those of wired PBXs, key systems, centrex systems, and LANs. Indeed, it is projected that the early development of the wireless systems market will take the form primarily of wireless "adjuncts" to existing wired PBXs, key systems, centrex, and LANs. It will be necessary for these adjunct systems to be designed to be compatible with existing wired premises systems.

Satisfying these user expectations and gaining the full benefits of wireless systems will be possible only if the options for the deployment of wireless devices in the office include unlicensed offerings which may be designed and marketed by any vendor. The expectations of end users for fully featured wireless office systems will not be satisfied if the only available products are those provided as an adjunct to licensed service offerings of cellular or PCS licensees.

Therefore, it is critical for the Commission to authorize spectrum for unlicensed PCS devices and to take the steps necessary to ensure that the unlicensed spectrum is cleared as expeditiously and as cost effectively as possible.

Spectrum clearing for unlicensed PCS devices requires special attention from the Commission. As the UTAM Report states, the Commission's requirements for full compensation of the relocation costs of fixed microwave licensees who currently occupy the unlicensed PCS spectrum "pose a number of substantial obstacles to the unlicensed device industry." UTAM Report at 9. Foremost among these is that the number of fixed microwave devices in the 1910-1930 MHz band is far greater than the Commission initially supposed. UTAM estimates that there are 450 fixed microwave stations in the 1910-30 MHz band<sup>2/</sup>, and the total cost of clearing this band will be an eight- or possibly even nine-digit figure.

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<sup>2/</sup> This is the band proposed by the FCC for unlicensed PCS use. NATA believes that, once spectrum clearing is completed, this band will quickly become overcrowded with unlicensed PCS devices, so that additional frequencies will be needed for unlicensed PCS.

Under the Commission's compensation rules, these many millions of dollars must somehow be raised, used to fund the clearing of the band, and then recovered, presumably from the ultimate users of the band or their equipment suppliers.

Unlike the situation with licensed PCS, in the case of unlicensed PCS there is no market mechanism which will automatically satisfy the compensation requirements imposed by the Commission. Therefore, the Commission must recognize and forthrightly address the fact that the clearing of spectrum for unlicensed PCS devices presents unusual problems. Finding solutions to these spectrum clearing problems is more complicated than in the case of licensed services, due to the diffusion of responsibility which is inherent in an unlicensed scheme. There is no one company that the Commission can look to handle spectrum clearing for the unlicensed frequency band in any part of the country. As the Report explains:

under the existing framework, the unlicensed spectrum appears to "belong" to all manufacturers and users of unlicensed PCS, yet is the responsibility of none.

UTAM Report at 8.

The work of UTAM testifies to the telecommunications equipment industry's collectively strong interest in unlicensed PCS and in creating an industry-wide entity to perform spectrum clearing for unlicensed PCS. However, the industry cannot do it alone. If the spectrum is to be cleared for unlicensed use, then the Commission must exercise a strong leadership role in making spectrum clearing possible through a Commission-approved mechanism.

Industry has, however, laid the groundwork for Commission action. Specifically, UTAM has stepped up to the challenge of designing a collective mechanism to solve the spectrum-clearing problem. As explained in the Report, UTAM approached the problem as a four-part task. The collective entity responsible for spectrum clearing must:

Secure funding for relocation costs;

Assume responsibility for managing the relocation process;

Perform frequency-coordination type activity so that "non-nomadic" devices can be done prior to spectrum clearing;<sup>3/</sup>

Assure equitable industry participation in the funding and management of these challenges.

The result of UTAM's efforts is a carefully thought-out and sensible proposal which offers promising solutions to many of the problems associated with the tasks outlined above.

NATA will not attempt to comment on all aspects of UTAM's proposal, most of which are discussed in detail in the Report. We believe the UTAM effort is commendable and has a great deal of promise. Most of the issues have been solved, at least in principle, and require only the fleshing out of details. We do

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<sup>3/</sup>UTAM has determined that it is necessary to allow early deployment of "non-nomadic" devices, such as wireless PBXs and LANs, subject to frequency-coordination type procedures, because otherwise there is no conceivably feasible method of financing the spectrum clearing process. If deployment of the first unlicensed devices cannot occur until the frequency is completely cleared, then the amount of money that must be raised "up front" is too great, and the time lag between raising the money and recovering it from equipment suppliers or users is too long. No rational person would contribute the "up-front" money at any conceivably allowable rate of return.

have continuing concerns regarding the issue of financing the "entity," a problem which UTAM has not yet solved -- in part because it is not yet known what limits the Commission would set on the financial incentives that could be utilized to encourage the investment of up-front "capital" in the entity. For other reasons as well, the financing problem has been difficult to solve in advance. As UTAM correctly points out:

in light of the need for clear spectrum prior to full deployment of new unlicensed technologies, the industry is placed in the unenviable position of having to secure the up-front costs of financing numerous relocations now for a business that will not exist for perhaps many years. Manufacturers must therefore grapple with the problems of how to "prove out" the market to ascertain future demand for their services, raise sufficient revenues to fund relocations, and expedite the delivery of new unlicensed technologies to the public.

UTAM Report at 12.

UTAM is continuing to work on this issue, as well as others that have yet to be resolved. Our concern is that solving the financing problem may require affirmative steps by the Commission to facilitate the development of the initial capital necessary to "seed" the process.

NATA urges the Commission to consider the UTAM plan carefully and approve either the UTAM plan or a better plan, if one can be found. It may not be possible for the Commission to finalize all the details of the entity in a single order. At a minimum, the Commission should make clear that it is committed to finding a

solution to the spectrum clearing problem and enabling the deployment of unlicensed PCS devices.

The UTAM plan is not perfect; nor is there any guarantee that it will actually succeed. However, we believe it is the best proposal that has been developed to date. Therefore, it should be given a chance to work unless the Commission or the parties can develop a superior plan.

Above all, the Commission needs to make a clear commitment to making unlicensed PCS "happen." Such a commitment would, at a minimum, act as a "beacon" that will help the industry coalesce to address the financing problem. Therefore, assuming that a more effective technical solution to the financing problem does not immediately materialize, NATA urges the Commission to make a clear, firm statement that it has decided to authorize spectrum for unlicensed PCS and that it will take whatever steps are necessary and appropriate to see that the spectrum clearing process is adequately financed.

In so doing, the Commission should recognize that it may have a continuing responsibility to facilitate the development of a viable marketplace for wireless PBXs, key systems, centrex, and LANs.

#### CONCLUSION

The UTAM Report has taken important steps toward making possible an unlicensed PCS market. However, spectrum clearing to establish this market requires a strong commitment from the Commission as well. By definition, there are no licensees who can



be relied upon to take responsibility for negotiating spectrum clearing. The whole idea of wireless PBXs and LANs is that they are products which users can control and configure to serve their needs. Users, however, cannot be expected to take on the spectrum clearing function on their own, and manufacturers cannot do so without the Commission's help. The Commission must recognize the value, and the special needs, of an unlicensed PCS market and must make a determination to do what is necessary to bring this market into being.

Respectfully submitted,

  
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